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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/930,302	08/16/2001	Hiroaki Taniguchi	2038-265	9388

7590 04/23/2003

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EXAMINER

BEFUMO, JENNA LEIGH

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 04/23/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/930,302	TANIGUCHI, HIROAKI	
	Examiner	Art Unit	
	Jenna-Leigh Befumo	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,4. 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign mentioned in the description: 30, page 13, line 14. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign not mentioned in the description: 31. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: the grammar is awkward in the phrase “the toner has having an outer layer” on page 2, lines 20 – 21; the phrase “to use composite a nonwoven fabric” on page 5, line 12; and the phrase “Am example” on page 10, line 17. Additionally, the specification refers to the surface area using units of μm (page 3, line 10) and not μm^2 . Area is a two-dimensional value and should have units which are in terms of a distance squared.

Appropriate correction is required.

Claim Objections

5. Claim 1 is objected to because of the following informalities: the phrase “toner has having an outer layer” is grammatically awkward. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 3 is indefinite. It is unclear how the outer layer can a surface area which is measured in units of μm . Area represents a two-dimensional value and cannot be recorded in units which are one-dimensional.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Shibatani et al. (5,998,038).

Shibatani et al. discloses a development sheet used in electrophotographic printing processes that has excellent properties of transferring and fixing toner (column 1, lines 7 – 10). The image is applied by producing a latent image and then transferring the image to a development sheet (column 3, lines 1 – 7). Colored images are produced by applying the image one time in each of the different toner colors of yellow, cyan, blue, magenta and black (column 3, lines 8 – 10). The development sheet can be a nonwoven fabric which is defined as being made from synthetic fibers such as poly(ethylene terephthalate), poly(butylene terephthalate), polyacrylonitrile, or polypropylene (column 4, lines 46 – 51).

Since the prior art uses the same method of applying the image as described by the Applicant in the specification, i.e., electrophotographic printing, then the image produce on the fabric will inherently have the limitations recited in claim 1 such as the toner slightly permeating the fibers lying in a vicinity of the surface and the different portions of toner being present in a plurality of independent dots. Thus, claim 1 is rejected. Claim 5 is rejected with claim 1 since the Applicant only positively claims the printed nonwoven fabric recited in claim 1. The multi-layer structure is not positively claimed and is instead recited as an intended use for the nonwoven which is not given patentable weight at this time.

Claim Rejections - 35 USC § 102/103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 2 – 4 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Shibatani et al.

The features of Shibatani et al. have been set forth above. Although Shibatani et al. does not explicitly teach the limitations outer layer thickness and surface are, it is reasonable to presume that said limitations are inherent to the invention. Support for said presumption is found in the use of similar materials (i.e. toner and nonwoven fabrics) and in the similar production steps (i.e. electrophotographically applying the toner to the nonwoven fabric) used to produce the printed fabric. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. In the alternative, the claimed limitations would obviously have been provided by the process disclosed by Shibatani et al. Note *In re Best*, 195 USPQ 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made above under 35 USC 102. Therefore, claims 2 – 4 are rejected.

Claim Rejections - 35 USC § 103

13. Claims 1 – 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 03-028859 (English Abstract).

JP 03-028859 discloses a printing method which produces a sharp, waterproof color picture on a base material by transferring a toner image to a highly flexible base material via electrophotographic printing (abstract). The highly flexible base material can be cloth or nonwoven fabric (abstract). JP 03-028859 fails to teach the type of fibers used in the nonwoven fabric. Nonwoven fabrics can be made out of either natural or synthetic fibers. It is well known to make nonwoven fabrics from synthetic fiber to produce manufactured nonwoven fabrics with good strength properties and abrasion resistance. Also synthetic fibers can be engineered to have

unique structure, such as multi-lobal, rectangular, hollow, or wedge shape as well as microfiber deniers which produce softer fabrics with improved barrier properties. Therefore, it would have been obvious to one of ordinary skill in the art to use synthetic fibers in the nonwoven fabric taught by JP 03-028859 since synthetic fibers as good strength and abrasion properties and the fibers can be engineered to other desired properties for specific end-uses.

Since the prior art uses the same method of applying the image as described by the Applicant in the specification, i.e., electrophotographic printing, than the image produce on the fabric will inherently have the limitations recited in claim 1 such as the toner slightly permeating the fibers lying in a vicinity of the surface and the different portions of toner being present in a plurality of independent dots. Thus, claim 1 is rejected. Claim 5 is rejected with claim 1 since the Applicant only positively claims the printed nonwoven fabric recited in claim 1. The multi-layer structure is not positively claimed and is instead recited as an intended use for the nonwoven which is not given patentable weight at this time.

Although JP 03-028859 does not explicitly teach the limitations outer layer thickness and surface area, it is reasonable to presume that said limitations are present in the synthetic nonwoven fabrics printed by the method taught by JP 03-028859. Support for said presumption is found in the use of similar materials (i.e. toner and nonwoven fabrics) and in the similar production steps (i.e. electrophotographically applying the toner to the nonwoven fabric) used to produce the printed fabric. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. Therefore, claims 2 – 4 are rejected.

Conclusion

Application/Control Number: 09/930,302
Art Unit: 1771

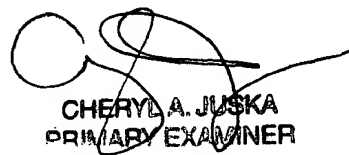
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Befumo whose telephone number is (703) 605-1170. The examiner can normally be reached on Monday - Friday (9:00 - 5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Jenna-Leigh Befumo
April 16, 2003



CHERYL A. JASKA
PRIMARY EXAMINER